Patterns of Knowledge Management leadership and delegation: supporting an agile organization

Suzanne Zyngier
La Trobe University, Australia
s.zyngier@latrobe.edu.au

Jill Owen
University of New South Wales, Australia
j.owen@adfa.edu.au

Abstract
This paper presents findings on organizational agility as an aim of implementing Knowledge Management (KM). These findings are contextualized by examining the leadership roles and the tasks that achieve this goal. In particular we examine structures in KM: of the authority; of the development; and of the implementation of KM strategy that support agility. Using data from a global survey we find definition of leadership in types. We disclose common patterns of KM leadership and its delegation. The data demonstrates that clear transparent lines of delegated authority exist, and that these delegations enable the operationalization of KM strategy in a planned manner, that can also be clearly implemented to realize anticipated benefits.

1. Introduction

Defining the organization in terms of what it is capable of reorients the vision of that organization from the confines of ‘what is’ and to ‘what can be’ and enables staff to realign or to review activities and strategies according to available information resources and to infrastructural resources [1]. This concern is paramount in understanding the impact of Information Systems on the organization where the “top five management concerns were: (1) business productivity and cost reduction; (2) IT and business alignment; (3) business agility and speed to market; (4) business process re-engineering; and (5) IT reliability and efficiency.” [2]. A business goal of Information Systems practice is to create agility in responding to changing business requirements [3].

Organizational agility is the capacity to adapt successfully to unanticipated change. Such changes can occur in technology, production methods, economic situation and in responding to new or created opportunities [4]. The concept of KM being intrinsically linked to agility was raised by Dove [5] who proposed that the agile enterprise is enabled by the capacity to respond supported through the effective management of knowledge resources. Peterson, Parker, and Ribbers [6] acknowledge that alignment with business requirements is essential to a value proposition or strategic approach in KM. Such an approach supports and maintains organizational agility by leveraging knowledge assets in the organization to support innovation, process improvement and the replication of best practice within the organization. Malhotra [7] reviewed the integration of knowledge management into business processes for agility and the capacity to adapt; that is the management and control of knowledge to effectively manage the continuum of resources required planning for retention and sorting of required resources using technologies to ensure this. However, Malhotra’s [7] focus on KM and technology omits essential aspects of KM alignment with organizational strategy, specifically we draw attention to the issue of leaders and leadership for KM.

A recent survey of KM literature to develop a conceptual framework of existing research found that the focus has been on the form of knowledge, location of KM implementation, departmental location of and the responsibility for the exercise of KM authority. In addition KM processes, management style, whether KM has an internal or external focus, quality considerations of KM activities, the type of organization and the size of organization are also considered important [8]. However, that paper noted that it does not consider – nor does it define - strategic KM issues.
Much early and current research has critically examined the role of leadership in KM [9-14] however we find no research that examines not only the pattern of leadership but what leaders do and the supporting structures that plan and implement KM in organizations. This paper presents survey research that through the use of tree diagrams illustrates such structures and discusses these in relation to supporting organizational agility through KM.

This paper presents findings on organizational agility as an aim of implementing KM. These findings are contextualized by examining the leadership roles and the tasks that achieve this goal. In particular we examine structures in KM: of the authority; of the development; and of the implementation of KM strategy that support this aim. The paper is structured as follows firstly we discuss agility and strategic alignment and knowledge leadership. The results of a survey are presented, and this data is followed by an analysis and discussion of the results. The conclusion draws together the research and discusses future research opportunities.

2. Agility and strategic alignment

We have defined organizational agility as the capacity to adapt successfully to unanticipated change in technology, production methods, economic situation and in responding to new or created opportunities. This concept of agility allows an iterative approach which takes into account the social and contextual nature of the process such as dealing with the emerging phenomena of complex wicked problems [15]. This closely mirrors the agile methodology where requirements evolve during the life of the project. This iterative collaborative and incremental process involves all parties drawing on and incorporating earlier knowledge [16]. It focuses on participation from individuals rather than business processes [17]. While some suggest that KM usually is derived from strategies tied to organizational objectives [18-20], it should be noted that not all KM activities are alike, each should be treated as specific to the organization and to the aims and objectives of both the organization and also of the specific aims of the KM program itself [18].

Therefore a formulaic approach to the development and implementation of KM is inappropriate. There is some early guidance available to help organizations and management to the design of the KM authority roles and responsibilities [21-23] to name a few however, there is little empirical research focused on capturing the awareness and understanding of those involved in the chain of responsibility for KM policy development, and then of planning and finally of implementing the KM strategies.

We acknowledge that organizations across the globe appear to be paying attention to knowledge, exploring what it is and how to create, transfer, and how to use it more effectively. In a study of thirty-one knowledge management projects in twenty-four companies Davenport [24] discussed the differences and similarities of the identifying four broad types of activities: (1) the creation of knowledge repositories, (2) initiatives to improve knowledge access, (3) development of a knowledge sharing environment, and (4) and the management of intellectual capital and knowledge artifacts as assets. In that review, Davenport [24] also identified eight characteristics contributing to the success of the knowledge projects: link to industry value; supporting infrastructure; knowledge structures; organizational culture; clearly defined purpose; clearly defined aims and objectives; multiple approaches to facilitating knowledge sharing and transfer; and senior management support.

The industry value proposition can be evaluated by focus on the areas of greatest pain/greatest gain for leveraging organizational knowledge. This process requires the identification of the value proposition. The prioritization of objectives also permits the ranking of various initiatives, in conjunction with the ranking of need for supporting infrastructures and other organizational capabilities and provides a rationale in balancing the allocation of resources between competing strategy budgetary and personnel requirements [25, 26]. KM needs to be most closely linked to the fundamental features of a business strategy as defined in KM aims and objectives [27]. Policy direction set by executive authority ensures that the KM strategy is aligned with organizational policy and supports the aims and objectives of the organization as a whole [23]. The next section canvasses the role of KM leadership and of the individuals or team that works to affect the KM strategy.

3. Knowledge leadership

Lakshman [28] identifies four approaches to leaders and leadership in the KM literature: the trait approach, the behavior approach, the contingency approach, and the transformational and charismatic approach. Of these, it is suggested that leaders facilitate “the existence and availability of required information and knowledge through such processes as knowledge management can have a significant impact on organizational effectiveness” [28], and that the transformational and charismatic approach to knowledge supports the development of vision and of
agility in organizations. However charismatic knowledge leadership relies on interpersonal and related network contacts between the CKO and stakeholders [29]. The very nature of charismatic knowledge management leadership is that it relies on individuals and is therefore temporally bound. When a charismatic leader leaves the organizational then KM strategy may (or may not) founder. It is essential element to recognize the need to manage that risk – the risk of leadership that is bound to personality. That is not to say that charisma is not useful as a leadership trait, however it is not useful to rely on this when considering the strategic management of any organizational assets.

This approach to leadership acknowledges the context and specific social circumstances of leadership [30], allowing sense to be made of the situation [31]. This acknowledgement allows the leader to focus on the context facilitates the problem as being assesses as one of command (with a clear problem to be addresses), management (to address routine problems) where the focus is a routine problem or as a wicked issue. The wicked issue looks at the complex, uncertain and ambiguous nature of the problem. Significant meaning, reflection and making sense of the situation are required to resolve wicked problems [32]. These problems are often referred as type 1, 2, and 3 problems; Type 1 is technical and solvable; type 2 is a problem with an unknown solution; and type 3 is where the problem and solution are unknown [33] where sense making [31] and social constructivist [34] approaches are needed to engage and eventually resolve the problem. From a KM perspective we find that type 3 takes into account organizational and strategic issues where the problem and solution are unknown and need to be resolved by sense-making and reflection; type 2 KM planning where the problem is defined but the solution is unknown; and type 1 KM implementation which the problem and solution are defined and KM tools and techniques are applied.

KM needs to be coordinated at executive of senior management level. Hasen, Nohria and Tierney [35] suggested a CEO or Managing Director/COO who will then select an approach to the KM strategy that supports the aims and objectives of the organization to advantage the company and its clients thus retaining the organization's competitive edge. However, "companies that isolate knowledge management risk losing its benefits, which are highest when it is coordinated with HR, IT and competitive strategy" [35]. Turning to a range of KM 'how to' literature [36-39], we find that that KM processes are frequently described in three phases: strategic authority based phase, the planning and then the implementation phases.

The strategic, authority based phase is concerned with governance. KM Governance is not only the activity of controlling knowledge resources in order to achieve organizational objectives [40]. This paper defines KM Governance as the implementation of authority through transparent activity to leverage the sum of the knowledge of the organization to fulfill the aims and objectives of that organization. It provides a mechanism for managing the identified risks to knowledge assets in a planned and fiscally responsible manner. It provides a mechanism for measurement and evaluation and for the linked review and revision of KM policy [41].

KM governance distils the aims and objectives of the body into policy to support action. Governance operates through a responsible entity that creates and envisions KM policy for the organization. It has authority and is responsible for the KM activities of that organization [41, 42].

It is vital therefore to examine who governs KM, who develops KM strategy and who implements KM. Since the 1990s, the person responsible for directing and coordinating KM activities for organizations has usually been identified as the Chief Knowledge Officer (CKO), or the Chief Learning Officer (CLO). Raub and Von Wittich suggested [43] that one of the role’s of the CKO was in aligning the decentralized contributions of functional groups within the organization rather than concerns of strategic alignment, Chief Knowledge Officers manage existing knowledge in tacit and explicit resources, Chief Learning Officers in creating an environment to facilitate and enhance staff learning [44]. We find little in the literature that examines this additional focus on the planning and implementation of KM.

In the following sections we describe the research design, research findings, and discussion of the findings on the chain of responsibility for KM policy development, and then of planning and finally of implementing the KM strategies.

4. Research design

The research design describes a questionnaire grounded in the theoretical KM literature and validated in the European Union and then twice used in Australia [45, 46]. Instrument adaptation was informed by constructs developed through related case study data collection [47-49].

This research was directed to Knowledge Officers at all levels in public and private companies, and government, semi government and not-for-profit organizations. The survey was conducted as an
anonymous web-based survey. The data was collected using nine online closed KM discussion forums and list-serves that included members from ‘blue chip’ corporations, SME, government and not-for-profit institutions. Limitations of using this frame to obtain respondents can include response bias due to personal interest in KM, the representativeness of population and possible low response rate. Email recruitment of the sample is not claimed to be representative of all organizations or of the opinion of all KM practitioners [50]. Sampling issues are the same for internet and paper based surveys albeit with the internet it is more difficult to verify [51]. There is a legitimate problem in the use of volunteers from the internet however non-response bias is countered in that the estimated response rate from the nine discussion groups gives a total population pool of 5500 although the experience of the researcher in this instance also indicates that there is very large overlap of memberships between discussion groups as it is found that members’ email addresses regularly appear in postings on up to three groups on a weekly basis. The estimated overlap may be up to 25% with a total sample size being closer to 4125. Therefore it is suggested that the actual response (218 responses) is 5.3%. Whilst this is a seeming low response rate, the average response rate for an unsolicited survey with no personalization of salutation and no follow up is 5% [50]. Therefore the results are acceptable as an indicative snapshot.

The online survey was prefaced by an explanatory cover letter. The survey instrument comprised 22 multiple choice questions and three questions that required a text based response. The sections canvassed KM definitions, the tools and techniques used, cultural aspects of knowledge management, organizational obstacles to knowledge management, and the structural mechanisms supporting the development and implementation of KM strategies. The final section sought both organizational and individual demographic information. The results were analyzed using the statistical software package SPSS. Analysis into account the possibility of the acquiescent response set. Participants were offered the opportunity to be informed of the aggregate results of this research. Responses received from 34 countries in every continent indicate that KM is a globally accepted business practice.

5. Research Findings

In this section, we present the results of the survey and demonstrate that while patterns of KM leadership, development and implementation vary, governance is a key to KM supporting the aims and objectives of an organization, and to strategic agility. The first section of the survey deals with the respondent’s definition of KM and issues relating to KM strategies contributing to the achievement of business goals.

5.1. Agility

We have defined organizational agility as the capacity to adapt successfully to unanticipated change in technology, production methods, economic situation and in responding to new or created opportunities. This research asked the respondents about the importance of KM to their organization for identifying new markets, in product/service development, in improving effectiveness, in instigating change, in improving efficiency, in improving market share, for competitive advantage, for growing revenue or for increasing profit. Each respondent could respond to multiple items, the result is shown in Figure 1 below. We focus on instigating change as a key to agility although this appears to not be an area of current substantive concern in the extant KM literature.

![Figure 1 Aim and objective in KM](image)

We conclude that agility is in the mid-band of concerns for implementing KM. Investigating the variables using Pearson correlation tests shown in Table 1 below, we find that instigating change is also significantly correlated with other variables among organizational ‘aims and objectives in implementing KM’. These were: growing profits; improving market share; identifying new markets; developing new products or services; improving efficiency and improving effectiveness. Therefore we suggest that agility cannot be easily separated from other aims, but as the data suggests, is intrinsically linked in that instigating change is involved in new product and service development, improving market share and so on. That is, organizational agility is required in order
to effect these aims, and that knowledge is the key resource to be leveraged to do so [52].

The survey also collected text-based data in response to questioning about strategic benefits realized through the development and implementation of a KM strategy. The following comments underscore the relationship between KM and organizational agility. The first comment that “we have been recently involved in a huge merger, KM has contributed to ‘close the gap’ and facilitate the integration between the two former organizations” clearly demonstrates the change management aspect of organizational agility. While KM to “keep innovation in mind”, to assist “Prompt decision making”, and that the “Strategy has resulted in saving the company millions of dollars, delivered new products and services to our clients, even shaped some of our new client measures of satisfaction that indicates an increasing value in our relationships with our clients” are all indicators of agile organizations that are able to adapt successfully to changes in technology, production methods, and to respond to new and created opportunities.

Importantly, as is shown, in Table 1 below agility is also strongly correlated with the variable Authority entity where we found a significant Pearson Correlation of .200**, Sig. (2-tailed) 0.003 between the variables KM Authority entity and motivation for the introduction of KM being instigating change.

**. Correlation is significant at the 0.01 level (2-tailed).

<table>
<thead>
<tr>
<th>Instigating change</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growing profits</td>
<td>.183**</td>
<td>0.007</td>
<td>218</td>
</tr>
<tr>
<td>Improving market share</td>
<td>.209**</td>
<td>0.007</td>
<td>215</td>
</tr>
<tr>
<td>Identifying new markets</td>
<td>.289**</td>
<td>0.846</td>
<td>216</td>
</tr>
<tr>
<td>Developing new products or services</td>
<td>.243**</td>
<td>0.003</td>
<td>218</td>
</tr>
<tr>
<td>Improving efficiency</td>
<td>.291**</td>
<td></td>
<td>218</td>
</tr>
<tr>
<td>Improving effectiveness</td>
<td>.301**</td>
<td></td>
<td>218</td>
</tr>
<tr>
<td>Authority entity</td>
<td>.200**</td>
<td>0.003</td>
<td>218</td>
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</tbody>
</table>

We also found that the variable Authority entity is strongly correlated with the variable “is there a formal terms of reference or position description for this authority” with a Correlation Coefficient = .359,* This correlation is significant at the 0.05 level (2-tailed). Therefore we conclude that formal defined leadership is important to effective KM.

This data on authority raises the question of who is leading KM. In the following section we describe the roles and responsibilities of leaders and present hitherto unrevealed data on the delegated patterns of leadership and management in KM strategy development and on responsibility for KM strategy implementation.

5.2. Knowledge Leadership and delegation

This research finds that the dominant pattern of KM leadership in organizations where Instigating Change is the key organizational objective has the CKO as the leader (32%), the CEO or Managing Director as the leader (25%) and a Stakeholder group as the next most dominant form (23%). Others are far less represented with the Director of HR and the CIO holding each only 9% of leadership roles. This is shown in Figure 2 below.

Figure 2 Authority for KM

In the tables below we demonstrate that KM leadership is distributed among Consultant, Directors of HR, Chief Information Officers, and stakeholder groups, Chief Knowledge / IP / Learning Officers and CEO / Managing Directors. What is new in this data, is that we are able to provide data on those who are responsible to these leaders. That we are able to identify those responsible for the development of KM strategy and who is responsible for the implementation. Figure 2 below shows the pattern of authority and of it delegation where the CEO or MD has authority for KM. We find that where this is the case, that KM strategy development is predominantly delegated to a CKO (7 instances), to a Department (9 instances), or to a Consultant (3 instances) with the balance of respondents are evenly scattered. Figure 2 also shows that where the CKO or a department develops KM strategy they also have the responsibility for implementation of that strategy.
However, where a Consultant develops KM strategy a formal cross functional team has responsibility for implementation of that strategy.

Figure 3 CEO or MD has authority for KM

Figure 3 below shows the pattern of authority and of it delegation where the CEO or MD has authority for KM. We find that where this is the case, that KM strategy development is predominantly delegated to a CEO (2 instances), or to a Department (8 instances), or to a Consultant (3 instances) with the balance of respondents are evenly scattered. Figure 3 also shows that where the CEO, the CKO or a department develops KM strategy they also have the responsibility for implementation of that strategy. However, where a Consultant develops KM strategy a formal cross functional team again has responsibility for implementation of that strategy.

Figure 4 CKO or CLO has authority for KM

Figure 4 below shows the pattern of authority and of it delegation where the CKO or CLO has authority for KM. We find that where this is the case, that KM strategy development is predominantly delegated to a CKO (4 instances), to a Department (8 instances), or to a Consultant (3 instances) with the balance of respondents are evenly scattered. Figure 4 also shows that where the CKO or a department develops KM strategy they also have the responsibility for implementation of that strategy.

Figure 5 CIO has authority for KM

Figure 5 below shows the pattern of authority and of it delegation where the CIO has authority for KM. We find that where this is the case, that KM strategy development is predominantly delegated to a CKO (2 instances), or to a Department (3 instances), or to an informal cross functional group (2 instances) with the balance of respondents are evenly scattered. Figure 5 also shows that in each of these cases each delegated entity also has responsibility for implementation of KM strategy.

Figure 6 Stakeholder group has authority for KM

Figure 6 below shows the pattern of authority and of it delegation where a Stakeholder group has authority for KM. We find that where this is the case, that KM strategy development is predominantly delegated to a CKO (4 instances), to a Department (2 instances), or to an informal cross functional group (2 instances) with the balance of respondents are evenly scattered. Figure 5 also shows that in each of these cases each delegated entity also has responsibility for implementation of KM strategy.
Finally in Figure 7 below we show the pattern of authority and of it delegation where a Consultant has authority for KM. It is noteworthy that there are very few delegations from the Consultant and that these delegations are both numerically to few to show any trend and that where this is the case, that KM strategy development is evenly scattered and that each delegated entity also has responsibility for implementation of KM strategy.

<table>
<thead>
<tr>
<th>Director of HR has authority over KM</th>
<th>Implementation responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>CKO</td>
<td>CIO</td>
</tr>
<tr>
<td>Dept or Function</td>
<td>Informal cross functional team</td>
</tr>
<tr>
<td>CKO</td>
<td>3</td>
</tr>
<tr>
<td>CIO</td>
<td>1</td>
</tr>
<tr>
<td>Informal cross functional team</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 7 Director of HR has authority for KM

<table>
<thead>
<tr>
<th>Consultant has authority for KM</th>
<th>Implementation responsibility</th>
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<tbody>
<tr>
<td>CEO / Managing Director</td>
<td>CIO</td>
</tr>
<tr>
<td>Dept or Function</td>
<td></td>
</tr>
<tr>
<td>CEO / Managing Director</td>
<td>1</td>
</tr>
<tr>
<td>CIO</td>
<td>1</td>
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<tr>
<td>Dept or Function</td>
<td></td>
</tr>
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</table>

Figure 8 Consultant has authority for KM

6. Discussion and conclusions

The development of a KM strategy within the organizations surveyed was used to drive change as a means of adapting successfully to changes in technology, production methods, the current challenging economic situation and developing or responding to new or created opportunities. This can be effectively compared to agile methodology where requirements evolve during the activity. We have found that organizations do not use a formulaic approach to the leadership structures for the development and implementation of KM and that the dominant pattern of these structures are in accord with guidance in the design of the KM authority roles and responsibilities [18-20]. This research has presented for the first time empirical data that clearly identifies those involved in the chain of responsibility for KM policy development, and then of planning and finally of implementing the KM strategies.

We find that KM strategy – aims and objectives expressed as KM policy together with financial responsibility for that strategy was predominantly developed by a CKO, a CEO or a stakeholder group. This implies that the impact of the strategy is viewed from a long term perspective by the people with the authority to make decisions. However, the planning and implementation of the strategy mean that the strategy is transformed into normal business using existing processes, tools and techniques. These KM roles are generally taken on by a CKO, a department, or a cross-functional team. These delegated authority roles for planning and implementation of KM strategy are often but not always effected by the same entity. The role of the consultant is minimal.

This research contributes to theory in that the scope of leadership activities undertaken in the KM strategy development and implementation have been aligned with Beinecke’s [33] definition of leadership in types 1, 2 and 3 of leadership where type 1 is technical and solvable; type 2 is a problem with an unknown solution; and type 3 is where the problem and solution are unknown in the immediate but each type of leadership requires both sense making and reflection to resolve the problem. From this we suggest that KM leadership type 3 (policy development) takes into account organizational and strategic issues, KM leadership type 2 (planning) has the strategy defined but the solution is unknown and KM leadership type 1 (implementation) has the strategy and planning defined and is where KM tools and techniques are applied.

The development of a KM strategy is by its nature complex as the stakeholders involved in the development exert their influences in the development of the strategy undertaken by the leaders. This aspect of leadership fits Jennex and Olffman’s perspective on management focus on the importance of knowledge [11], and Grint’s [32] notion of resolution of wicked problems. This is important where KM strategy that is used to drive and implement change, such as organizational change, or is a deliberate response to a recognized problem situation. This aspect of KM leadership occurs at level 3 leadership within the formal structure of the organization where the leader or entity delegates authority for the development and implementation of the strategy. While the Senior Executive is formally responsible for the operationalization the actual planning and implementation is carried out by staff with delegated roles where leadership types 1 and 2 are exhibited at the operational level of KM strategy development and implementation.

Specifically the dominant leadership and delegation patterns found are:
• CEO or Managing Director has authority then KM strategy development and implementation is predominantly delegated to a CKO or to a KM Department.

• Chief Knowledge Officer or Chief Learning Officer has authority then KM strategy development and implementation is predominantly delegated to a CEO, to a CKO, or to a KM Department.

• A Stakeholder group has authority then KM strategy development and implementation is predominantly delegated to a Chief Knowledge Officer, to a Department, or to a cross functional group.

This data demonstrates that KM is governed through the exercise of authority at the Senior Executive level. This data demonstrates that clear transparent lines of delegated authority exist, and that these delegations enable the operationalization of KM strategy in a planned manner, that can also be clearly implemented to realize anticipated benefits.

This research contributes to theory and to practice through shedding light on common patterns of KM leadership and its delegation. This enables practitioners in their understanding that there is no one single pattern for KM leadership.

Further, we add to the body of existing knowledge by for the first time revealing that KM strategy aims and objectives support organizational agility, and that KM for organizational agility is significantly correlated growing profits; improving market share; identifying new markets; developing new products or services; improving efficiency and improving effectiveness.

Future research will examine these leadership patterns in a broader scale survey to be implemented this coming year. It will also compare the development and implementation of KM strategies that are iterative and adaptive by nature, with a project based environment.

7. References


